Force free magnetic fields:
cylindrical vs. toroidal geometry

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It is shown that the behaviour of force free magnetic fields is governed by the existence of a first integral of energy. We give its explicit expression and we identify the parametric space where these fields are ergodic or non-ergodic. We further compare results based on toroidal geometries with results based on cylindrical geometries, to show the modification due to toroidal curvature.

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